AMENDMENTS TO THE CLAIMS:

Kindly cancel claim 9, without prejudice, and amend claims 7, 8, 10, 23-28, 30 and 33-40, and add new claims 41-43, as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application.

Claim 1 (withdrawn): Method for the measuring of the density of blood cells in blood characterized in the directing of a light beam into the space that is to be investigated and that one or several sensors are so arranged that its or their sense sectors do not intersect the beam of the light source in the volume.

Claim 2 (withdrawn): Method according to claim 1, characterized in that two sensors are used that are opposed to each other.

Claim 3 (withdrawn): Method according to claim 1, characterized in that light beam and sensor sector(s) are perpendicular to each other.

Claim 4 (withdrawn): Sensor device for the measuring of the density of blood cells in blood characterized in comprising vessel or tubing, a light beam emitter facing the tubing, and one or several sensor(s) also facing the vessel and so arranged that its or their sense sectors do not intersect the beam of the light source in the vessel or tubing.

Claim 5 (withdrawn): Sensor device according to claim 4, characterized in that the locations of the light source and sensor(s) respectively are separated lengthwise of the vessel or tubing.

Claim 6 (withdrawn): Sensor device according to claim 4, characterized in that two sensors are arranged with their sensing directions perpendicular to the light beam.

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Claim 7 (currently amended): An optical sensor device for measuring blood constituents in an elongated vessel of tubing ~~probe arrangement that surrounds blood in a receptacle~~, said optical ~~probe arrangement~~ sensor device comprising at least two sets of light emitters and light detectors, each set comprising one light emitter and at least one detector, ~~each set arranged to transilluminate the blood at a preferred angle between said light emitter and said light detector—or detectors—of each set, where said angle is at least sufficient to avert direct light from said light emitter to said light detector, for the detection of blood constituents~~ wherein a first set of light emitters are arranged as an array encircling the elongated vessel or tubing a longitudinal location along the vessel or tubing, and at least a second set light detectors are arranged as arrays encircling the elongated vessel or tubing at a longitudinally different location along the vessel or tubing, and said light emitters and said light detectors are aimed so that the detectors do not directly intercept light from the emitters.

Claim 8 (currently amended): **[[**An]]The optical sensor device according to claim 7, comprising four sets of light emitters and two or three light detectors in each set, wherein a light detector in each set ~~may represent~~ represents a detector incorporated in an adjacent set.

Claim 9 (cancelled).

Claim 10 (currently amended): [[An]]The optical ~~probe arrangement~~ sensor device according to claim 7, wherein a second array of light detectors are longitudinally located at a third location around said ~~receptacle's~~ vessel's or tubing's circumference, and the light ~~detector~~ detectors are arranged to encircle the ~~receptacle~~ vessel or tubing at that circumferential location.

Claim 11 (withdrawn): A method for processing signals from sensor devices as claimed in claim 4, including an amplifier for amplifying signals from the sensor devices, which comprises

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employing a signal processing algorithm on the signals from said sensor devices, to detect blood constituents.

Claim 12 (withdrawn): A method for processing signals from light detectors as claimed in claim 11, which comprises employing a signal processing algorithm on the signals from said light detectors, to detect hematocrit.

Claim 13 (withdrawn): A method according to claim 12, which comprises employing a multi variable analysis of signals from all light detectors engaged in the signaling process.

Claim 14 (withdrawn): A sensor device as claimed in claim 4, wherein a third array of light sensors are longitudinally located at a fourth location around a receptacle's circumference, and the light sensors are arranged to encircle the receptacle at that circumferential location and an second array of light beam emitters longitudinally located at a fifth location around said receptacle's circumference, and the light sensors are arranged to encircle the receptacle at that circumferential location.

Claim 15 (withdrawn): A method for processing signals from light sensors as claimed in claim 14, including an amplifier for amplifying signals from the light sensors, which comprises employing a signal processing algorithm on the signals from said light sensors, to detect blood constituents.

Claim 16 (withdrawn): A method for processing signals as claimed in claim 15, which comprises employing a signal processing algorithm on the signals from said light detectors, to detect hematocrit.

Claim 17 (withdrawn): A method for processing signals from sensor devices as claimed in claim 4, including an amplifier for amplifying signals from the sensor devices, which comprises

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employing a signal processing algorithm on the signals from said sensor devices, to detect oxygen saturation in blood.

Claim 18 (withdrawn): A method according to claim 11, wherein signals are processed in the time domain.

Claim 19 (withdrawn): A sensor device according to claim 1, further comprising a system to calculate hematocrit values from blood, and presenting the data to a display, and/or transferring data to another application.

Claim 20 (withdrawn): A sensor device as claimed in claim 4, further comprising a system to calculate hematocrit values and oxygen saturation values from blood, and presenting the data to a display, and/or transferring data to another application.

Claim 21 (withdrawn): Method for the measuring of the density of blood cells in blood, characterized in the directing of a light beam into the space that is to be investigated and that two sensors, are used that are opposed to each other.

Claim 22 (withdrawn): Method according to claim 21, characterized in that light beam and sensor "beams(s)" are perpendicular to each other.

Claim 23 (currently amended): A optical sensor device as claimed in claim 7, ~~characterized in that the measuring takes place in a tubing that is clamped in~~ further comprising a holder with V-shaped recesses ~~so that~~ for flattening the [[tube]]vessel or tubing ~~is given~~ to a square cross section, and [[that]]the light emitters and sensors are arranged at ~~the flat~~ flattened surfaces of the vessel or tubing.

Claim 24 (currently amended): [[A]]The method for processing signals from light detectors as claimed in claim 7, including an amplifier for amplifying signals from the light detectors, which

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comprises employing a signal processing algorithm on the signals from said light detectors, to detect blood constituents.

Claim 25 (currently amended): [[A]]The method for processing signals from light detectors as claimed in claim 24, which comprises employing a signal processing algorithm on the signals from said light detectors, to detect hematocrit.

Claim 26 (currently amended): [[A]]The method according to claim 25, which comprises employing a multi variable analysis of signals from all light detectors engaged in the signaling process.

Claim 27 (currently amended): **[[**An]]The optical ~~probe arrangement~~ sensor device as claimed in claim 7, wherein a third array of light detectors are longitudinally located at a fourth location around a receptacle's circumference, and the light detectors are arranged to encircle the receptacle at that circumferential location, and an second array of light emitters are longitudinally located at a fifth location around said receptacle's circumference, and the light detectors are arranged to encircle the receptacle at that circumferential location.

Claim 28 (previously presented): A method for processing signals from light detectors as claimed in claim 27, including an amplifier for amplifying signals from the light detectors, and which comprises employing a signal processing algorithm on the signals from said light detectors, to detect blood constituents.

Claim 29 (withdrawn): A method for processing signals as claimed in claim 15, which comprises employing a signal processing algorithm on the signals from said light detectors, to detect hematocrit.

Claim 30 (currently amended): A method for processing signals from ~~light detectors~~ optical sensor devices as claimed in claim 7, including an amplifier for amplifying signals from the light

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detectors, which comprises employing a signal processing algorithm on the signals from said light detectors, to detect oxygen saturation in blood.

Claim 31 (withdrawn): A method according to claim 15, wherein signals are processed in the time domain.

Claim 32 (withdrawn): A method according to claim 17, wherein signals are processed in the time domain.

Claim 33 (currently amended): **[[**A]]The method according to claim 24, wherein signals are processed in [[the]]a time domain.

Claim 34 (currently amended): [[A]]The method according to claim 28, wherein signals are processed in [[the]]a time domain.

Claim 35 (currently amended): [[A]]The method according to claim 30, wherein signals are processed in [[the]]a time domain.

Claim 36 (currently amended): [[An]]The optical [[probe]] sensor device as claimed in claim 7, further comprising a system to calculate hematocrit values from blood, and presenting the data to a display, and/or transferring data to another application.

Claim 37 (currently amended): [[An]]The optical [[probe]] sensor device as claimed in claim 7, further comprising a system to calculate hematocrit values and oxygen saturation values from blood, and presenting the data to a display, and/or transferring data to another application.

Claim 38 (currently amended): [[An]]The optical [[probe]] sensor device as claimed in claim 7, characterized in that the measuring takes place in a vessel or tubing that is clamped in a holder with V-shaped recesses so that the vessel or tubing [[tube]] is [[given]]flattened to a square cross section, and that light emitters and sensors are arranged at ~~the flat~~ flattened surfaces of the vessel or tubing.

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Claim 39 (currently amended): [[An]]The optical [[probe]] sensor device as claimed in claim 36, characterized in that the measuring takes place in a vessel or tubing that is clamped in a holder with V-shaped recesses so that the vessel or tube is [[given]]flattened to a square cross section, and that light sources and sensors are arranged at ~~the flat~~ flattened surfaces of the vessel or tubing.

Claim 40 (currently amended): [[An]]The optical [[probe]]sensor device as claimed in claim 37, characterized in that the measuring takes place in a vessel or tubing that is clamped in a holder with V-shaped recesses so that the vessel or tubing [[tube]] is [[given]]flattened to a square cross section, and that light sources and sensors are arranged at ~~the flat~~ flattened surfaces of the vessel or tubing.

Claim 41 (new): The method of claim 34, wherein the signals are processed sequentially.

Claim 42 (new): The method of claim 35, wherein the signals are processed sequentially.

Claim 43 (new): The optional sensor device as claimed in claim 7, wherein the light emitters emit at different wavelengths.

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